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BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Application Number: 09/862,949
Filing Date: May 22, 2001
Appellant(s): HACKWORTH, BRIAN M.

Brian M. Hackworth
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 07/24/09 appealing from the Office action mailed 2/24/09.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

7,107,534	De Jong	9-2006
5,819,028	Manghirmalani	10-1998
6,346,954	Chu et al.	02-2002

6,633,912	Welter et al.	10-2003
6,505,256	York	1-2003

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 77-81, 83, 85, 86, 88-94, 96, 98-104, and 106-109 are rejected under 35 U.S.C. 103(a) as being unpatentable over De Jong US Patent 7,107,534, in view of Manghirmalani US Patent 5,819,028 further in view of Chu 6,346954.

As per claim 77, De Jong teaches a method for managing a computer network, comprising:

operating a plurality of servers connected to the network, each server of the plurality of servers connected to one or more storage devices, (see De Jong figure. 13, col. 9, lines 55-col. 10, lines 2)

organizing a plurality of volumes across the plurality of servers, wherein each volume is a logical arrangement of the one or more storage devices connected to a particular server

assigning consolidating two or more selected volumes of the plurality of volumes into a group of volumes using a graphical user interface, wherein at least two volumes in the group of volumes are located on separate servers of the plurality of servers;(see De Jong, col. 10, lines 7-25)

consolidating two or more selected volumes of the plurality of volumes into a group of volumes using a graphical user interface, wherein at least two volumes in the group of volumes are located on separate servers of the plurality of servers;(see De Jong; col. 5, lines 15-45; De Jong consolidates servers into clusters)

identifying a party interested in statistical information related to operation of a group of volumes using the graphical user interface; (see De Jong, col. 11, lines 20-30)

polling all volumes within the group of volumes by a monitoring process, for statistical information;

displaying on the graphical user interface statistical information relating only to the group of volumes; (see De Jong, col. 8, lines 40-58)

in response to determining that an event has occurred, notifying the interested party. (see De Jong, col. 11, line 20-30)

De Jong does not explicitly teach comparing the monitored statistical information to a threshold value to determine whether an event has occurred;

Manghirmalani teaches comparing the monitored statistical information to a threshold value to determine whether an event has occurred; (see Manghirmalani, col. 12, lines 15-50)

It would have obvious to an artisan at the time of the invention to include Manghirmalani's teaching with method of claim De Jong in order to allow users to provide guideline for the monitoring system.

However, they fail to teach

combining statistical information form the servers within the group of volumes in order to provide a statistical information for the group of volumes;

Chu teaches consolidating two or more selected volumes of the plurality of volumes into a group of volumes using a graphical user interface, wherein at least two volumes in the group of volumes are located on separate servers of the plurality of servers;

combining statistical information form the servers within the group of volumes in order to provide a statistical information for the group of volumes; (see Chu, figure, 5, item 72; col. 8, lines 10-20)

It would have obvious to an artisan at the time of the invention to include Chu's teaching with method of claim De Jong and Manghirmalani in order to allow users with the ability to assign customized groups.

As per claim 78, De Jong, Manghirmalani, and Chu teach the method according to Claim 77. De Jong further teaches the method comprising: determining the identity of the party in response to a predetermined event condition. (see De Jong, col. 11, lines 20-30)

As per claim 79, De Jong, Manghirmalani, and Chu teach the method according to Claim 78. Manghirmalani further teaches the method comprising: setting a the threshold value for a

parameter of a storage device in a the group of volumes predetermined and determining the event condition in response to the parameter exceeding the threshold value. (see De Jong, col. 11, lines 20-30)

As per claim 80, De Jong, Manghirmalani, and Chu teaches the method according to claim 79. De Jong further teaches the method comprising: including in the parameters at least one of a central processing utilization level, a storage disk free space, a storage disk used space, and environmental condition, and an operational status. (see De Jong, col. 8, lines 40-58)

As per claim 81, De Jong, Manghirmalani, and Chu teach the method according to Claim 77. De Jong further teaches the method comprising:

sending by e-mail to the party a notification of the statistical information related to the selected group of volumes.(see De Jong, Figure 21, col. 10, lines 45-61)

As per claim 83, De Jong, Manghirmalani, and Chu teach the method according to Claim 77. De Jong further teaches the method comprising:

retaining information with respect to the interested party in a database. (see De Jong, col. 11, line 20-30)

As per claim 85, De Jong, Manghirmalani, and Chu teach the method according to Claim 77. De Jong further teaches the method comprising:

presenting the statistical information related to the group of volumes through a graphical user interface. (see De Jong, col.10, lines 25-45)

As per claim 86, De Jong, Manghirmalani, and Chu teach the method according to Claim 77. De Jong further teaches the method comprising:

placing alerts on the graphical user interface, the alerts identifying a problem condition shown by the statistical information related to the group of volumes. (see De Jong, col.10, lines 25-45)

As per claim 88, De Jong, Manghirmalani, and Chu teach the method according to Claim 77. De Jong further teaches the method comprising:

consolidating the statistical information related to the group of volumes with a statistical information related to an another group of volumes. (see De Jong, col. 10, lines 25-45)

As per claim 89, De Jong, Manghirmalani, and Chu teach the method according to Claim 77, further comprising:

using a RAID array of disks as a storage device of the one or more storage devices. (see De Jong, col. 4 ,lines 60-70)

As per claims 90-94, 96, 98, 99, 101, and 102, they are rejected under the same rationale as claims 77-81, 83, 85, 86, 88, and 89. Supra.

As per claim 103, De Jong teaches a computer readable media, comprising:

said computer readable media containing instructions for execution on a processor for the practice of a method of managing a computer network, the method having the steps of, (see De Jong, col. 5, lines 30-56)

operating a plurality of servers connected to the network, each server of the plurality of servers connected to one or more storage devices, (see De Jong, col. 5, lines 45-60)

organizing a plurality of volumes across the plurality of servers, wherein each volume is a logical arrangement of the one or more storage devices connected to a particular server (see De Jong, col. 7 lines 1-23)

consolidating one-two or more selected volumes of the plurality of volumes into a group of volumes using a graphical user interface, wherein at least two volumes in the group of volumes are located on separate servers of the plurality of servers; (see De Jong, col. 9, lines 40-55; col. 5, lines 15-45; De Jong consolidates servers into clusters)

identifying a party interested in statistical information related to operation of the group of volumes using the graphical user interface; (see De Jong, col. 11, lines 20-30)

polling all volumes within the selected group of volumes by a monitoring process, for statistical information; (see De Jong, col.

displaying, on the graphical user interface, statistical information relating only to the group of volumes; (see De Jong, col. 8, lines 40-58)

in response to determining that an event has occurred, notifying the interested party. (see De Jong, col. 11, line 20-30)

De Jong does not explicitly teach comparing the monitored statistical information to a threshold value to determine whether an event has occurred;

Manghirmalani teaches comparing the monitored statistical information to a threshold value to determine whether an event has occurred; (see Manghirmalani, col. 12, lines 15-50)

It would have obvious to an artisan at the time of the invention to include Manghirmalani's teaching with method of claim De Jong in order to allow users to provide guideline for the monitoring system.

However, they fail to teach combining statistical information form the servers within the group of volumes in order to provide a statistical information for the group of volumes;

Chu teaches combining statistical information form the servers within the group of volumes in order to provide a statistical information for the group of volumes; (see Chu, figure, 5, item 72; col. 8, lines 10-20)

It would have obvious to an artisan at the time of the invention to include Chu's teaching with method of claim De Jong and Manghirmalani in order to allow users with the ability to assign customized groups.

As per claim 104, De Jong teaches a system, comprising:

a plurality of storage appliances, wherein each storage appliance is configured with at least one volume and each volume is a logical arrangement of a plurality of storage devices; (see De Jong, col. 7 lines 1-23)

a management station executing on a separate server from the plurality of storage appliances, the management station configured to access usage and performance information on the plurality of storage appliances and associated volumes; (see De Jong, col. 9, lines 40-55)

a graphical user interface (GUI) connected to the management station, the GUI configured to allow a user to organize two or more volumes from the plurality of storage appliances into a group of volumes, and the GUI configured to display statistical information relating to the group of volumes, wherein at least two volumes in the group of volumes are located on separate storage appliances of the plurality of storage appliances; (see De Jong, col. 10, lines 24-46)

a management station storage device connected to the management station, the management station storage device configured with a database, the database storing information about the group of volumes; (see De Jong, col.10, lines 24-46)

determine an event has occurred when the monitored statistical information exceeds the threshold value and to notify an interested party of the event. (see De Jong, col. 10, lines 24-46)

However, De Jong fails to teach a threshold value associated with statistical information of the group of volumes and the management station further configured to compare monitored statistical in formation of the group of volumes with the threshold value.

Manghirmalani teaches a threshold value associated with statistical information of the group of volumes and the management station further configured to compare monitored statistical in formation of the group of volumes with the threshold value. (see Manghirmalani, col. 12, lines 15-50)

It would have obvious to an artisan at the time of the invention to include Manghirmalani's teaching with method of claim De Jong in order to allow users to provide guideline for the monitoring system.

However, they fail to teach combining statistical information form the servers within the group of volumes in order to provide a statistical information for the group of volumes;

Chu teaches combining statistical information form the servers within the group of volumes in order to provide a statistical information for the group of volumes; (see Chu, figure, 5, item 72; col. 8, lines 10-20)

It would have obvious to an artisan at the time of the invention to include Chu's teaching with method of claim De Jong and Manghirmalani in order to allow users with the ability to assign customized groups.

As per claim 106, De Jong and Manghirmalani teach the system of claim 104. De Jong teaches wherein the management station is connected over a LAN to the plurality of storage appliances. (see De Jong, col. 5, lines 30-45)

As per claim 107, De Jong and Manghirmalani teach the system of claim 104, De Jong further teaches wherein each volume is formed from two or more RAID groups within the plurality of storage devices. (see De Jong, col. 6, lines 25-45)

As per claim 108, De Jong and Manghirmalani teach the system of claim 104, De Jong further teaches wherein the interested party is notified by an email, alarm, alert, telephone call, or page that is sent using an automated system. (see De Jong, col. 11, lines 15-22)

As per claim 109, De Jong and Manghirmalani teach the system of claim 104, De Jong further teaches wherein the interested party is one or more users, administrators, or managers. (see De Jong, col. 11, lines 15-23)

Claims 82, 84, 95, 97, and 110 rejected under 35 U.S.C. 103(a) as being unpatentable over anticipated De Jong, US Patent 7,107,534, in view of Manghirmalani US Patent 5,819,028 in view of Chu US Patent 6,346,954 further in view of Welter US Patent 6,633,912.

As per claim 82, De Jong, Manghirmalani, and Chu teach the method according to Claim 81. They fail to teach the method further comprising:

including at least one web link in the e-mail for use by the interested party.

Welter teaches at least one web link in the e-mail for use by the interested party.(see Welter, col. 21, lines 26-61)

It would be obvious to an artisan at the time of the invention to include Welter's teaching with method of De Jong, Manghirmalani, and Chu in order to allow user to view the network information through internet browser.

As per claim 95, it is rejected under the same rationale as claim 82. Supra.

As per claim 84, De Jong, Manghirmalani, and Chu teach the method according to Claim 77. They fails to teaches further comprising:

reporting the statistical information related to the selected group of volumes to a web page so that the party can obtain the statistical information by accessing the web page,

reporting the statistical information related to the selected group of volumes to a web page so that the party can obtain the statistical information by accessing the web page (see Welter, col. 21, lines 26-61)

It would be obvious to an artisan at the time of the invention to include Welter's teaching with method of De Jong, Manghirmalani, and Chu in order to allow user to view the network information through internet browser.

As per claim 97, it is rejected under the same rationale as claim 84. Supra.

As per claim 110, it is rejected under the same rationale as claim 84. Supra.

Claims 87, 100, and 105 rejected under 35 U.S.C. 103(a) as being unpatentable over anticipated De Jong, US Patent 7,107,534, in view of Manghirmalani US Patent 5,819,028 in view of Chu US Patent 6,346,954 further in view of York US Patent 6,505,256

As per claim 87, De Jong, Manghirmalani, and Chu teach the method according to Claim 86. They fail to teach method comprising:

coding the alerts with color to indicate a severity of the problem condition.

York teaches the method comprising:

coding the alerts with color to indicate a severity of the problem condition. (see York, col. 6, lines 30-55)

It would be obvious to an artisan at the time of the invention to include York's teaching with the method of De Jong, Manghirmalani, and Chu in order to provide maximum flexibility for user to set alarm color based upon severity.

As per claim 100, it is rejected under the same rationale as claim 87. Supra.

As per claim 105, De Jong and Manghirmalani teach the system of claim 104. They fail to teach wherein the statistical information stored on the database is bundled in various time periods of days, weeks, quarters, or years that each have roughly a same number of intervals, each bundle having a different relative time span between respective intervals to have samples for more recent time periods maintained in smaller intervals, while samples for older time periods are maintained at successively longer sample intervals.

Sekizawn teaches the statistical information stored on the database is bundled in various time periods of days, weeks, quarters, or years that each have roughly a same number of intervals, each bundle having a different relative time span between respective intervals to have samples for more recent time periods maintained in smaller intervals, while samples for older time periods are maintained at successively longer sample intervals. (see Sekizawn, fig. 42 A-B)

It would be obvious to an artisan at the time of the invention to include Sekizawn's teaching with the method of De Jong and Manghirmalani in order to provide user with periodic exampling.

(10) Response to Argument

Appellants' arguments focused on the following:

A. Claim 77-89

1. Whether the combination of Dejong, Manghirmalani and Chu teaches "organizing a plurality of volumes across the plurality of servers, wherein each volume is a logical arrangement of the one or more storage devices connected to a particular server?"

1. The combination of Dejong, Manghirmalani and Chu teaches this limitation. Chu allows user to divide the physical drives into different logical driver and these physical drives are stored in multiple different server systems. (see Chu figure 7, items 106, 108, and 110; see Chu col. 9, lines 23-36; Examiner also considered each logical drive to be a volume; col. 3, lines 45-60) Therefore the combination teaches organizing a plurality of volumes across the plurality of servers, wherein each volume is a logical arrangement of the one or more storage devices connected to a particular server.

2. Whether the combination of Dejong, Manghirmalani, and Chu teaches "consolidating two or more selected volumes of the plurality of volumes into a group of volumes using a graphical user interface, wherein at least two volumes in the group of volumes are located on separate servers of the plurality of servers?"

2) The combination of Dejong, Manghirmalani, and Chu teaches this limitation. Each array in Chu is a group of volumes and Chu allows user to have multiple arrays. (see Chu figure 7, items 106, 108, and 110; Examiner also considered each logical drive to be a volume; col. 3, lines 45-60) Furthermore, Chu keeps statistical information of a plurality of arrays. (see Chu figure 5, item 72, column 8, lines 10-20, col. 3, lines 45-60) Therefore the combination teaches consolidating two or more selected volumes of

the plurality of volumes into a group of volumes using a graphical user interface, wherein at least two volumes in the group of volumes are located on separate servers of the plurality of servers.

B. Claims 90-102

As per claims 90-102, appellant made similar arguments as claim 77-89. (see response for claims 77-89)

C. Claim 103

As per claim 103, appellant made similar arguments as claim 77-89. (see response for claims 77-89)

D. Claims 104-110

As per claims 104-110, appellant made similar arguments as claim 77-89. (see response for claims 77-89)

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

Peng Ke

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